



## ABSTRACT OF THE DISCLOSURE

A number of improvements relating to methods and 5 apparatuses for kidney dialysis are disclosed. These include checking of dialysate bypass status using flow measurement; using a flow sensor to confirm the absence of ultrafiltration during bypass; automatic testing of ultrafiltration function by removal of a discrete volume 10 from a portion of the dialysate flow path coupled with a pressure test of that part of the flow path; using a touch screen user interface; bar graph profile programming of ultrafiltration, sodium, and bicarbonate parameters; using a RAM card to upload treatment instructions to, and to 15 download treatment data from, the machine; automatic setting of proportioning mode (acetate or bicarbonate) based on connections of concentrate lines; predicting dialysate conductivity values based on brand and formulation of concentrates; minimizing no-flow dead time 20 between dialysate pulses; initiating operation in a timed mode from a machine power-off condition; preserving machine mode during machine power-fail condition; calibration scheduling and reminding; automatic level adjusting; and blood leak flow rate detecting.

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